

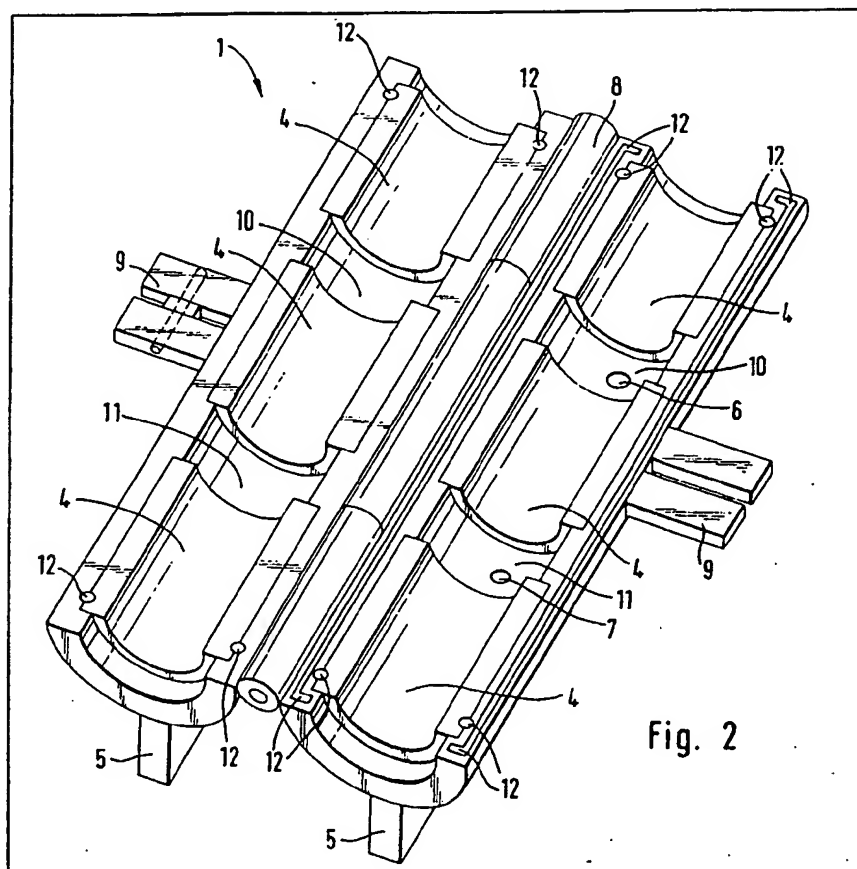
# (12) UK Patent Application (19) GB (11) 2 077 789 A

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- (71) Applicant Leif Høvring, Eide, N—4250 Kopervik, Norway
- (72) Inventor Leif Høvring
- (74) Agents Stevens, Hewlett & Perkins, 5, Quality Court, Chancery Lane, London WC2A 1HZ

## (54) Wire lubricating device

(57) The device comprises a pair of similar semi-circular shell sections; a plurality of sleeves 4 arranged along the length of the bore of the device; mounting brackets 5; a supply pipe for lubricant 6; an overflow pipe for

lubricant 7; hinges 8 between the shell sections; a latching mechanism 9 for the shell sections so that they enclose a running wire; a lubricant chamber 10 fed by supply pipe 6; a similar overflow chamber 11; and seals 12 for containing lubricant within the device.



GB 2 077 789 A

Fig. 1

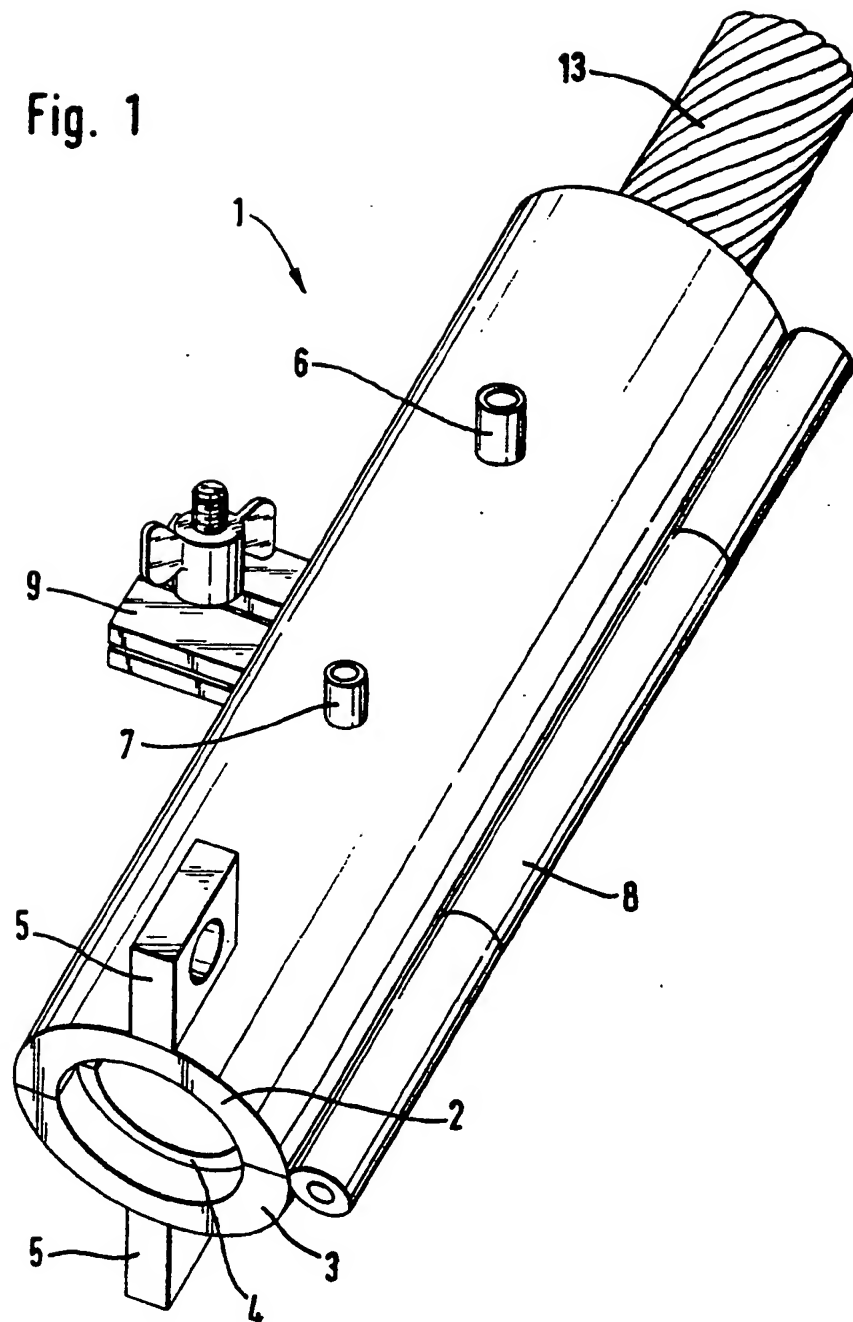
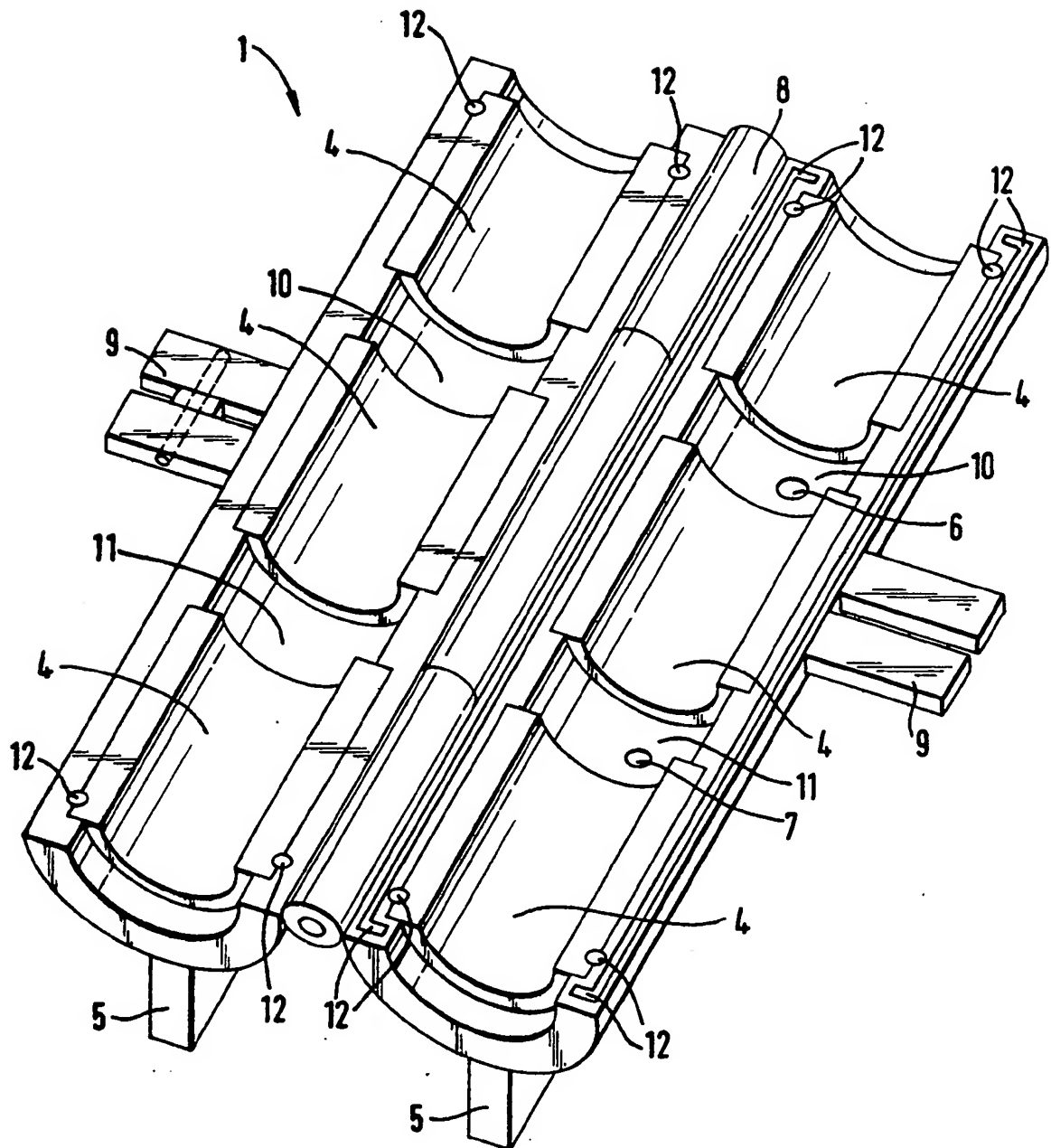


Fig. 2



## SPECIFICATION

## Wire lubricating device

This invention relates to a device for lubricating wire.

5 Wire is extensively used for example in connection with cranes.

One disadvantage experienced in the use of wire is the necessity to apply lubricants in order to maintain characteristics of the wire such as low frictional resistance against pulleys, flexibility, longevity, and corrosion resistance.

10 The most commonly used method for lubricating wire involves dipping a cloth in the lubricant and then manually rubbing the cloth along the wire. This method of lubrication is very labour intensive, and also not very effective as the lubricant is not able to penetrate the wire.

15 An alternative method for lubricating wire, is to let the wire pass underneath an opening through which the lubricant flows. The disadvantage of this lubrication method is the necessity to use a low viscosity lubricant, and also by this method the lubricant is unable to penetrate the wire.

20 Several devices for lubricating wire are also known. Such devices commonly comprise a pair of duplicate semi-circular shell members which when latched together form a cylinder incorporating internal sleeves for the purpose of guiding the wire running longitudinally through the device, and also providing a seal against the wire, and the two cylinder shells being shaped so as to form an internal chamber into which a lubricant may be passed under pressure.

25 A serious disadvantage of known devices of this kind is that when the lubricant is forced into the device under pressure which is too high in relation to the speed at which the wire runs through the device, the lubricant will escape from the device at the points where the wire enters and leaves the device, causing spillage and excessive lubricant consumption.

30 The present invention intends to provide a lubricating device which does not suffer from the mentioned disadvantages.

35 According to the invention there is provided a wire lubricating device comprising two semi-circular shell members which together form a cylinder, a plurality of coacting pairs of sleeves arranged in the cylinder to guide and seal against a wire extending through the cylinder, one or more internal chambers for supply of lubricant under pressure to the wire, and one or more internal overflow chambers and overflow pipes for the purpose of collecting and transporting away excess lubricant.

40 To help understanding of the invention, a specific embodiment thereof will now be described with reference to the accompanying drawings in which:—

45 Figure 1 is a perspective view from above of a lubricating device in accordance with the invention in its closed position, and

50 Figure 2 is a perspective view of the device in its open position.

65 In the drawings, the numeral 1 refers generally to the lubricating device for wire. The device comprises a pair of similar semi-circular shell sections 2, 3; a plurality of sleeves 4 arranged along the length of the bore of the device; 70 mounting brackets 5; a supply pipe 6 for lubricant; an overflow pipe for lubricant 7; hinges 8 between the semi-circular shell sections 2, 3; a latching mechanism 9 for latching the semi-circular shell sections together; a lubricant chamber 10 extending around the inner circumference of the shell sections when closed together and bounded by sleeves 4 in the vicinity of the supply pipe 6; a similar overflow chamber 11; and seals 12 for containing lubricant within 75 the device. 13 refers to a wire to be lubricated.

80 The wire, passing longitudinally through the lubricating device 1, is lubricated by the passing of lubricant under pressure and of desired viscosity through the supply pipe 6. Excess lubricant is transported away from the lubricating device 1 by means of the overflow chamber 11 and the overflow pipe 7. Seals 12 and sleeves 4 of the same internal diameter as the diameter of the wire, prevent the lubricant from escaping from the device 1. The wire to be lubricated may be passed through the device 1, or the device 1 may run along the wire.

85 A scrape may be positioned in front of the device 1 for the purpose of scraping off old lubricant. The device may include additional chambers, for example a chamber wherein air is blown in order to dry the recently applied lubricant. The sleeves 4 may be replaceable so that the same device 1 may be used to lubricate 90 wires of different diameter.

95 By using a lubricating device for wire as described above, large quantities of wire may be lubricated in a quick and easy manner. As the lubricant is applied under pressure, the lubricant is able to penetrate the wire. An important advantage of this fact is that the lubricant will be squeezed out of the wire when the wire is subjected to tension or pressure, and consequently has a particular need for lubrication.

## 110 CLAIMS

1. A wire lubricating device comprising two semicircular shell members which together form a cylinder, a plurality of coacting pairs of sleeves arranged in the cylinder to guide and seal against 115 a wire extending through the cylinder, one or more internal chambers for supply of lubricant under pressure to the wire, and one or more internal overflow chambers and overflow pipes for the purpose of collecting and transporting away excess lubricant.

2. A wire lubricating device as claimed in claim 1 including a scrape for scraping off old lubricant.

3. A wire lubricating device as claimed in claim 1 or claim 2 including one or more additional chambers for passing air and/or water to recently applied lubricant on the wire.

4. A wire lubricating device as claimed in any

preceding claim wherein the sleeves are replaceable for lubrication of wires of differing diameters.

5. A wire lubricating device substantially as hereinbefore described with reference to the accompanying drawings.

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